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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/069,299	10/19/2001	Louis F. Gatti	Dunlop Tire - Gatti	2027

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EXAMINER

SHOSHO, CALLIE E

ART UNIT

PAPER NUMBER

1714

DATE MAILED: 01/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/069,299

Applicant(s)

GATTI, LOUIS F. 

Examiner

Callie E. Shosho

Art Unit

1714

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply is specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,9,10,14,16 and 17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-6,14,16 and 17 is/are allowed.
- 6) ☒ Claim(s) 7,9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. All outstanding rejections are overcome by applicants' amendment filed 11/3/03.

The following action is non-final in light of the use of a new reference against the present claims, namely, Lynch et al. (U.S. 6,274,662).

Claim Rejections - 35 USC § 103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. Claims 7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu (U.S. 5,508,333) in view of Lynch et al. (U.S. 6,274,662).

Shimizu discloses a tire tread comprising 100 parts diene based elastomer and 10-100 parts filler wherein the filler comprises 0.1-90 parts carbon black and 9.9-99.9 parts white filler such as barium sulfate or mixtures of barium sulfate and silica (col.16, lines 41-col.17, line 23 and col.17, line 28). Based on the amount of filler and barium sulfate, it is calculated that the amount of barium sulfate in the filler is approximately 9.9-99.9 wt.%. Although there is no disclosure of the amount of barium sulfate in terms of the volume percent of the filler, given that Shimizu discloses the use of small amount of barium sulfate, i.e. 9.9-99.9 parts based on 100 parts filler, it is clear that the filler would intrinsically possess, absent evidence to the contrary, less than 30 volume% barium sulfate as presently claimed.

The difference between Shimizu and the present claimed invention is the requirement in the claims of the particle size of barium sulfate.

Lynch et al., which is drawn to barium sulfate suitable for use in tire treads containing diene-based elastomers, disclose the use barium sulfate having average particle size of 0.1-10 microns in order to enhance vibration and/or dampening properties without adversely impacting abrasion wear/abrasion resistance, flexibility, and rolling resistance (col.1, lines 14-20, col.1, line 63-col.2, line 5, col.2, lines 15-21 and 53-56, col.3, lines 34-39, and claim 7).

In light of the motivation for using barium sulfate with particular particle size disclosed by Lynch et al. as described above, it therefore would have been obvious to one of ordinary skill in the art to use such barium sulfate in the tire tread of Shimizu in order to produce tire tread with enhanced vibration and/or dampening properties as well as good abrasion wear/abrasion resistance, flexibility, and rolling resistance, and thereby arrive at the claimed invention.

Allowable Subject Matter

4. Claims 1, 3-6, 14, and 16-17 are allowable over the "closest" prior art for the following reasons:

Smigerski et al. (U.S. 4,788,231) disclose tire tread comprising 100 parts diene-based elastomer and filler comprising 40-250 phr carbon black and 0.1-6.5 phr zinc sulfate. However, there is no disclosure or suggestion regarding the mean particle size of the zinc sulfate and thus, no disclosure or suggestion that the zinc sulfate has mean particle size of from about 0.5 to about 1 microns as required in claims 1 and 3-6.

Young discloses tire tread comprising 25-40% diene based elastomer, 20-50% carbon black, and 3-015% titanium dioxide and silica. However, there is no disclosure or suggestion regarding the mean particle size of the titanium dioxide and thus, no disclosure or suggestion that

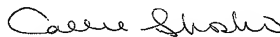
the titanium dioxide has mean particle size of from about 0.5 to about 1 microns as required in claims 14 and 16-17.

Kuan (U.S. 4,237,173), which is drawn to tire composition, discloses the use of titanium dioxide with particle size of 0.1-0.5 microns. However, Kuan is drawn to composition for tire sidewall not tire tread as required in claims 14 and 16-17. Further, Kuan discloses particle size of titanium dioxide with no disclosure of mean particle size of titanium dioxide as required in claims 14 and 16-17. Further, there is no disclosure in Kuan of diene-based elastomer as required in claims 14 and 16-17.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Callie E. Shosho whose telephone number is 571-272-1123. The examiner can normally be reached on Monday-Friday (6:30-4:00) Alternate Fridays Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



Callie E. Shosho
Primary Examiner
Art Unit 1714